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Patent  
Attorney's Docket No. 027545-840

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

Paul W. DENT

Application No.: 08/999,604

Filed: December 26, 1996

For: CALLING CHANNEL IN A CDMA  
COMMUNICATIONS SYSTEM



) Group Art Unit: 2731

) Examiner: W. Luther

**RESPONSE**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the Official Action mailed November 24, 1999 in connection with the above identified reissue application, reconsideration and allowance of the subject application are respectfully requested. Applicant notes with appreciation the Examiner's indication that claims 1-28 are allowed. Presently, claims 1-44 are pending.

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FEB 25 2000  
TC 2700 MAIL ROOM

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TECH CENTER 2700

**35 U.S.C. § 112 Rejections**

Claims 29-44 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Specifically, the Office Action indicates that support for "means for" performing claimed functions is not clear.

Initially, Applicant notes that claims 29, 30, 31, 32, 37, 38 and 41 are method claims and do not include any "means for" language. Neither claim 43 nor 44 include any "means for" language. Thus, Applicant does not understand the rejection of these claims under 35 U.S.C. § 112, first paragraph.

Claim 33, 34 and 35 combinations do include "means for" elements. However, it is respectfully submitted that the claimed elements are indeed described in the specification.

First, starting paragraph 6 in the Supplemental Declaration in Support of Reissue Application, Applicant has pointed out specific support in the original specification for reissue claims. Further, Applicant respectfully submits that support for the claim 33 combinations can be found, for example, at col. 6, lines 19-56 of the specification. Moreover, Applicant provides the following chart for showing exemplary support in the original specification for each claimed "means for" elements in Applicant's system claims. Applicant notes that different correspondences between described elements and claimed "means for" elements could also be drawn by those skilled in the art.

Reissue claims	Specification
33. A code division multiple access communication system for transmitting control information and user traffic signals from a first base station to a plurality of mobile stations comprising: means for coding control information using a spread spectrum code unique to control information to form a calling channel signal, wherein a duration of each of a succession of data blocks in the calling channel signal is equal to a duration of a speech coder's analysis period and wherein said control information means carries information for a specified group of mobile stations only at predetermined times;	Figs. 2, 4 and 6; col. 4, starting on line 12; claim 1 or 24 combinations; and element 21

means for coding each user traffic signal using a spread spectrum code unique to each traffic signal;	element 22
means for adding said calling channel signal and said coded traffic signal to obtain a composite signal;	element 27
means for modulating said composite signal on a radio frequency carrier to form a radio frequency signal;	elements 28 & 29
means for transmitting said radio frequency signal to said plurality of said mobile stations;	antenna element shown in Fig. 2
means for receiving said radio frequency signal at at least one of said mobile stations;	element 50
means for decoding said received signal in said mobile station to extract said control information; and	element 51
means for decoding said radio frequency signal in said mobile station to extract traffic information intended for said mobile station.	element 51
39. The system of claim 33, further comprising means for using said control information to maintain synchronization between the mobile station and the base station.	col. 5 lines 39-51
34. A code division multiple access communication system for paging a mobile station comprising: means for assigning said mobile station to a subgroup of data blocks to be transmitted on a calling channel;	Fig. 6; col 6, starting on line 57; element 60
means for encoding said subgroup of data blocks using a spread spectrum code assigned to said calling channel; and	element 60
means for transmitting a paging message to said mobile station in only said subgroup.	col. 6, lines 19-56
42. A code division multiple access communication system according to claim 34, further comprising: means for powering up parts of a receiver in said mobile station during transmission of the subgroup of data blocks and for powering down said parts of the receiver at other times;	Fig. 5 and 7; col 6, starting on line 19; col 8, starting on line 15;
means for receiving the subgroup of data blocks at the mobile station;	element 70

means for using the received subgroup of data blocks to synchronize the mobile station with the code division multiple access system; and	col. 5 lines 39-51
means for detecting the paging messages at the mobile station.	col 5, lines 24-29
35. A code division multiple access communication system for paging a mobile station comprising: means for assigning said mobile station to a subgroup of data blocks to be transmitted on a calling channel;	Fig. 6; element 60
means for encoding said subgroup of data blocks using a spread spectrum code assigned to said calling channel; and	element 60
means for transmitting a paging message to said mobile station in only said subgroup, wherein a duration of each of said data blocks is equal to a duration of a speech coder's analysis period.	col. 6, starting on line 19
36. The system of claim 35, wherein said means for assigning further comprises means for using a mobile identification code associated with said mobile station to determine said assigned subgroup.	col 6, starting on line 34
40. The system of claim 35, further comprising means for receiving said paging message at said mobile station and using said paging message to maintain synchronization between the mobile station and the code division multiple access communication system.	col. 5, starting on line 24

Applicant respectfully submits that the level of skill in this art is more than adequate to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of, for example, a duration of each of a succession of data blocks in the calling channel signal being equal to a duration of a speech coder's analysis period in col. 6, lines 19-56 based on this specification. Certainly the Office cannot reasonably support the position that the inventor, at the time the application was filed, did not have

possession of the claimed invention. Thus, it is respectfully submitted that all of the elements are described in the specification in the manner required by 35 U.S.C. § 112, first paragraph. Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

35 U.S.C. § 103(a) Rejections

Claims 29, 30, 32-34 and 36-40 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 5,103,459 to Gilhousen et al. (hereinafter simply Gilhousen) in view of U.S. Patent No. 5,230,084 to Nguyen (hereinafter simply Nguyen). For the reasons provided below, Applicant respectfully traverses this ground of rejection.

The Office Action (paper no. 9) acknowledges that Gilhousen does not disclose the recited features of assigning a mobile unit to a subgroup of data blocks and transmitting paging messages to the mobile unit in only the subgroup. The Office Action then relies on the power savings aspects of Nguyen to remedy the deficiencies of Gilhousen.

Initially, Applicant notes that neither cited document teaches or suggests a duration of each of a succession of data blocks in the calling channel signal is equal to a duration of a speech coder's analysis period, among other features in Applicant's claimed combinations. Specifically, the present invention discloses that only by careful generation of the spread spectrum codes used to transmit control and traffic channels in a code division multiple access system can synchronization be maintained during a mobile power savings

mode of operation (i.e., when mobiles are assigned to subgroups of data blocks of a control channel as claimed). The Office Action does not point out where, in either Gilhousen or Nguyen, this feature is alleged to be taught. Accordingly, should the Examiner maintain this ground of rejection in a subsequent communication, he is respectfully requested to identify the portions of the cited documents which are relied upon so that Applicant has a full and fair opportunity to respond thereto.

Moreover, Nguyen teaches power savings in the context of the well known Post Office Code Standard Advisory Group (POCSAG) standard and is therefore inapplicable in the code division multiple access context of the present invention. In other words, since the POCSAG standard is a frequency division multiple access approach based on simplex binary frequency shift keying (BFSK), a positive signal to noise ratio in the paging channel can be presumed (inasmuch as traffic and other control channels are assigned to carrier frequencies different than that used to for the paging channel). Consequently, mobile station receivers can easily be synchronized with the system even when powered up just prior to receiving a paging message. By way of contrast, no such positive signal to noise ratio exists in a code division multiple access system (inasmuch as all control and traffic channels simultaneously occupy a common portion of the spectrum). Thus, absent the teachings of the present invention, the power savings techniques of Nguyen cannot be successfully utilized in a code division multiple access system such as that described in Gilhousen.

Thus, absent the teachings of the present invention, one skilled in the art would not have been motivated to combine Gilhousen and Nguyen as is suggested in the Office Action and, even assuming *arguendo* that one would have been so motivated, such a combination would be unworkable absent the teachings of the present invention. Accordingly, applicant respectfully requests that the §103 rejection of independent claims 30 and 34 be reconsidered and withdrawn.

In view of all the above, applicant respectfully submits the present application is in condition for allowance, and prompt notice of the same is earnestly solicited. Should the Examiner have any questions regarding this response or the subject application in general, he or she is invited to contact the undersigned at the number provided below.

Respectfully submitted,

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